

What is claimed is:

1. Peptide compositions excellent for promoting cell growth comprising:

partial peptides of one or more peptide chains selected from peptide chains forming noncrystalline portions constituting silk protein, said partial peptides having specific amino acid sequences formed of four to forty amino acid residues.

2. The peptide compositions according to Claim 1, wherein the peptide chains having the specific amino acid sequences have amino acid sequences from any of the following (1) to (8) amino acid sequences:

- (1) VITTDSDGNE
- (2) NINDFDED
- (3) AASSVSSASSRSYDYSRRNVRKN
- (4) GSSGFGPYVAHGGYSGYEYAWSSESDFGT
- (5) YGWGDGGYGSDS
- (6) DEYVDN
- (7) VETIVLEEDPYGHEDIYEED
- (8) DDGFVLDGGYDSE

3. Peptides excellent for promoting cell growth, comprising any of the following (1) to (8) amino acid sequences:

- (1) VITTDSDGNE
- (2) NINDFDED
- (3) AASSVSSASSRSYDYSRRNVRKN
- (4) GSSGFGPYVAHGGYSGYEYAWSSESDFGT
- (5) YGWGDGGYGSDS
- (6) DEYVDN
- (7) VETIVLEEDPYGHEDIYEED
- (8) DDGFVLDGGYDSE

4. A method of separating and obtaining peptides excellent for promoting cell growth by molecular weight fractionation after hydrolysis of undegraded silk protein from a domesticated silkworm or undegraded silk fibroin from a wild silkworm belonging to *Antherea*.

5. The method of separating and obtaining the peptides

excellent for promoting cell growth according to Claim 4, wherein the hydrolysis is carried out by using a dilute acid, hydroxylamine or a protease.

6. A cell growth-promoting agent comprising the peptide compositions according to Claims 1 and 2.

7. A cell growth-promoting agent comprising the peptides according to Claim 3.

8. A cell adhesion agent comprising the peptide compositions according to Claims 1 and 2.

9. A cell adhesion agent comprising the peptides according to Claim 3.

10. A wound healing promoting agent comprising the peptide compositions according to Claims 1 and 2.

11. A wound healing promoting agent comprising the peptides according to Claim 3.

12. A cosmetic material comprising the peptide compositions according to Claims 1 and 2.

13. A cosmetic material comprising the peptides according to Claim 3.

14. A cell culture substrate comprising the peptide compositions according to Claims 1 and 2.

15. A cell culture substrate comprising the peptides according to Claim 3.